A Research Proposal

on

Relationship of Entrepreneurial Orientation and Business Performance of North Indian Firms

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1. INTRODUCTION

There is growing realization about potential contribution of entrepreneurship towards the economic development in both the developed and the developing countries. Because of its unique characteristics, entrepreneurship plays an important socio economic role in employment generation, balanced regional growth, resource utilization, income generation etc. There is no denial to the fact that the pace and progress of an economic system largely depends on the emergence of dynamic and innovative entrepreneurs. Instead of being dependent on the government subsidies and protections, these entrepreneurs have to play the role of change agents. Their ability to innovate and take risk decides the fate and direction of a country's economy. Today, Entrepreneurial activity represents one of the major engines of economic growth and accounts for the majority of new business development and job creation. According to **Timmons (1999),** the contribution of entrepreneurship to a nation's economic development is achieved by creating employment activities, generating innovation and utilizing creativity. Entrepreneurship boosts the economy of a country by creating an atmosphere of healthy competition among business entities which then creates a dynamic marketplace. Entrepreneurship has become an important issue for policy makers in almost all of the developing and developed countries. At one level, enterprise creation is recognized as an important tool for employment, growth and sustainable human development. At another level, it also encourages existing business enterprises to become more entrepreneurial to enhance their performance. As such, the 'dynamic equilibrium' achieved by a constantly innovating entrepreneur could generate the conditions for; (i) increased opportunities for employment (ii) additional wealth creation (iii) introduction and dissemination of new methods and technology; and (iv) overall economic growth.[1]

[1] http://www.knowledgecommission.gov.in/downloads/documents/NKC_Entrepreneurship.pdf accessed on 20 Dec, 2010.

The definition of entrepreneurship has been long defined by various authors; all of them have contributed a lot in this field but even then in the field of research entrepreneurship has been described as young, at a formative stage, and still in its infancy **(Low & Macmillam, 1988; Davidson, 1991; Rauch et al., 2006; Audretsch et al., 2009).**

The term entrepreneurship has been derived from the French verb '*entreprendre*', which mean to undertake. An entrepreneur is a person who brings about a change and possesses characteristics to implement ideas for the benefit of society as a whole. An entrepreneur is a person who has possession of a new enterprise, venture or idea and is accountable for the inherent risks and the outcome. The definition of an entrepreneur has been long debated. Webster's dictionary captured some of the original nuances of this term by defining entrepreneur as "one who organise a business undertaking, assuming risk for the sake of profit" **(Guralnik, 1982)**.

The term was originally a loanword from French, where an Irish banker working in France, **Richard Cantillon** (b. 1680- d. 1734), formally introduced the concept of entrepreneurship into the literature of commerce, economics and business, where he emphasized on two main functions of entrepreneur: (a) Risk taking, and (b) Uncertainty bearing.

Jean-Baptiste Say (1834) a French economist, has defined the word entrepreneur as "one who undertakes an enterprise, especially a contractor, acting as intermediator between capital and labour, one who utilizes all means of production - the labour of one, the capital or land of the other and one who finds in the value of product through which he resume the value of the wages, the interest or the rent." **Alfred Marshall (1930)** incorporated his interpretation to the term entrepreneurship, by adding that an entrepreneur must have the capabilities to manage with and through other people and must be constantly alert to seek opportunities or innovate in order to minimize costs and make progress. **Schumpeter (1934)** defines entrepreneurship as an event which includes introduction of a new product, quality improvement, introduction of a new method of production, opening of new market, discovery of a new source of supply of raw materials, creation of a new organization etc. He described that an entrepreneur is one who combines the input factors in such a manner that will generate a greater output and helps in generating wealth by creating demand in the market from a newly introduced innovation. He stated that entrepreneurship involves initiating and constituting changes in the structure of

business as well as accelerating the generation, dissemination and application of innovative ideas, products and services which facilitates the creation of new employment opportunities.

Entrepreneurship in the language of an economist is the capacity of an individual to innovate and ranges in scale from solo projects (even involving the entrepreneur only part-time) to major undertakings creating many job opportunities. It can be defined as the "process of creating value by bringing together a unique package of resources to exploit an opportunity" **(Stevenson & Jaillo, 1990).** Entrepreneurship refers to an individual's ability to transform ideas into actions with accurate economic and social purpose. It evolves a whole range of aptitudes like the capacity to bear risks, to forecast prospects of an enterprise, confidence and competence to meet unforeseen and adverse situations etc. According to **Hisrich and Peters (1998)** the process of entrepreneurship involves four distinct principles including the creation of new value, dedication of time and effort, risk bearing assumptions and personal rewards that include independence, personal satisfaction and at times, financial gains. **Shane and Venkataraman (2000)** describes entrepreneurship as a process of value creation through the identification and exploitation of opportunities but at the same time **Hitt et al. (2001)** pointed out that an appropriate set of resources in dynamic environment is one of the pre requirement to exploit these entrepreneurial opportunities. Some economists view entrepreneurship as a process to join intellectual, financial, materials and human resources into a mix that creates added-value and achieves a high return on invested capital for the individual entrepreneur **(Wiklund & Shepherd, 2003; Kraus et al., 2011).** Whereas **Drucker (2007)** states that entrepreneurs are those who find solutions.

2. REVIEW OF LITERATURE

The theory and methodology of this study has been built upon the foundation of past research and theory development in the field of entrepreneurship. The purpose of this section is to present the theme-wise summary of the review made for deciding the need and objectives of the present study.

The literature reveals the systematic development of the construct of entrepreneurship, where 1st half or 20th century was devoted toward defining the term entrepreneurship and identifying the role of entrepreneurship in the economic development of a country (**Say, 1834; Marshall, 1930; Schumpeter, 1934; Schumpeter, 1942; Burns & Stalker, 1961; McClelland, 1961).** During 1960's and 1970's, the focus shifted toward identification of factors affecting entrepreneurship i.e. why entrepreneurs start enterprises? During this phase entrepreneurship is associated with various individual and demographic traits, which encourage individuals towards entrepreneurship. Factors such as need for achievement, locus of control, self-efficacy, risk taking propensity, family influence, educational influence, work experience etc. along with various demographic characteristics were identified as antecedents of entrepreneurial behaviour **(Hagen, 1962; Kilby, 1971; Mintzberg, 1973; Conley, 1974; Weick, 1976; Lachman, 1980)**. In 1980's and 1990's entrepreneurial research moved towards identifications of the dimensions of entrepreneurial orientation and fit between the EO - Strategy models, which aligns the level of EO with different strategies **(Miller & Friese, 1982; Burgelman, 1983; Galbraith & Kazanjina, 1986; Miller & Toulouse, 1986; Covin & Slevin, 1988; Zahra, 1993; Covin et al., 1994; Lumpkin & Dess, 1996; Dess et al., 1997; Barringer & Bluedorn, 1999)**. Entrepreneurial opportunity recognition process again caught the attention of researches during 1990's, where **Venkatraman (1989)** has made a tremendous contribution. Last two decades witnessed the major developments in the area of Entrepreneurial orientation (EO) – Performance relationship and adoption of contingency framework to EO- Performance relationship, where it has been acknowledged that EO- Performance relationship is affected by organizational environment and industrial turbulence **(Covin & Slevin 1989; Zahra, 1991; Wiklund, 1999; Zahra & Garvis 2000; Lee & Penning 2001; Yusaf, 2002; Dimitratos et al.,**

2004; Kraus et al., 2005; Wiklund & Shepherd, 2005; Stam & Elfring, 2008; Kreiser & Davis, 2010; Grande et al., 2011).

2.1. Entrepreneurial Orientation (EO)

Entrepreneurial Orientation (EO) has emerged as a major construct within the strategic management and entrepreneurship literature over the past two and a half decades. It can be viewed as a characteristic of organizations, which can be measured by looking at top management's entrepreneurial style, as evidenced by the firms' strategic decisions and operating management philosophy **(Miller, 1983)**. **Covin and Slevin (1988)** argue that an organization's EO is the summation of the extent to which top managers are inclined to take business related risks, to favour change and innovation in order to obtain a competitive advantage for their firm and to compete aggressively with other firms. They proposed that EO should be considered as the strategic dimension which can be observed from the firms' strategic posture running along a continuum from a fully conservative orientation to a completely entrepreneurial one. They suggest that firms with a propensity to engage in relatively high levels of risk taking, innovative, and proactive behaviours have entrepreneurial orientation while those engaging in relatively low levels of these behaviours have conservative orientation **(Covin & Slevin, 1991)**. According to **Lumpkin and Dess (1996),** EO refers to the processes, practices, and decision-making activities that lead to new entry. They considered EO as a process construct, which is concerned with the methods, practices, and decision making styles used by the managers. However, the term EO is also used to refer to the set of personal psychological traits, values, attributes, and attitudes that are strongly associated with a motivation to engage in entrepreneurial activities **(Kilby, 1971; Mintzberg, 1973; Miller & Toulouse, 1986; Kreiser et al., 2002; Poon et al., 2006)**. EO is an important measure of the way a firm is organized. It has been conceptualized as the process and decision making activities used by entrepreneur to act entrepreneurially **(Lumpkin & Dess, 2001; Rauch et al., 2006; Kreiser & Davis, 2010; Ullah et al., 2011).** In gist, EO refers to a firm's strategic orientation and it is usually seen as the extent to which a firm innovates, takes risks to compete aggressively and acts autonomously and proactively.

Entrepreneurial orientation should be distinguished from entrepreneurship. The essence of entrepreneurial orientation is on how the entrepreneurs implement entrepreneurship in the

course of realizing their career ambition. On the other hand, focus of entrepreneurship is on new entry. New entry can be accomplished by entering new or established markets with new or existing goods or services **(Burgelman, 1983).**

2.1.1. Dimensions of Entrepreneurial Orientation

Entrepreneurial Orientation (EO) is often operationalized on the basis of three dimensions identified by **Covin and Slevin (1989)**, based on the earlier work of **Khandwalla (1976)** and **Miller and Friesen (1982)**, viz. 'Innovativeness', 'Risk Taking', and 'Proactiveness', to characterize and test entrepreneurship. But **Lumpkin and Dess (1996)** have identified two more dimensions 'Autonomy' and 'Competitive Aggressiveness' to conceptualize EO. However, it is sometimes argued that 'Autonomy' is an internal organizational driver of entrepreneurship, which influences the organizational climate for entrepreneurship **(Hadji et al., 2007; Hough & Scheepers, 2008)**. Some researchers also claim that 'Competitive Aggressiveness' forms a part of the proactiveness dimension and does not represent a separate dimension **(Hough & Scheepers, 2008; Chang & Lin, 2011).**

These dimensions have been briefly discussed below:

2.1.1.1. Innovativeness

Innovativeness of entrepreneurs is their propensity to innovate their business **(Miller & Friesen, 1982)**, their willingness to try the ways which are different from the existing, the enthusiasm to adopt new ideas or new methods to their business operation and the eagerness to implement the innovation strategy in their business **(Khandwalla, 1987)**. Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes **(Lumpkin & Dess, 1996)** that may result in new products, services, or technological processes and which may take the organization in new paradigm of success **(Swierczek & Ha, 2003)**. It also implies seeking creative, extraordinary or strange solutions to problems and needs. **Schumpeter (1934)** considers entrepreneurship essentially a creative activity and entrepreneur as an innovator who carries out new combinations in the field of men, money, material, machine and management. According to him entrepreneur is an economic men who tries to maximize his profits by making innovations in any one of the following fields: (i) new products, (ii) new production methods, (iii) new markets, and (iv)

new forms of organization. The degree of an entrepreneur's innovativeness will decide how far and how deep the innovation will go in business in order to meet both the strategic goal formulated for the business and the requirements from the environment **(Hult et al., 2004)**. Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art **(Covin et al., 2006).** An innovative strategic posture is thought to be linked to firm performance because it increases the chances that a firm will realize first mover advantage, stay ahead of their competitors, gain a competitive advantage and capitalize on emerging market opportunities that leads to improved financial results **(Kreiser et al., 2002, Hult et al., 2004; Kreiser & Davis, 2011).**

2.1.1.2. Risk Taking

Risk taking is the tendency to take bold actions such as venturing into unknown new markets and committing a large portion of resources to ventures with uncertain outcomes. **Richard Cantillon (1730)** describes entrepreneur as a rational decision-maker "who assumes risk and provides the management of the firm". In the 1800's **John Stuart Mill** argued that risk taking is the paramount attribute of entrepreneurship. Risk taking implies willingness for committing huge resources to opportunities which involve probability of high failure **(Mintzberg, 1973; Zahra, 1991; Wiklund & Shepherd, 2003)**. Risk handling is the process in which potential risks to a business are identified, analyzed, mitigated, and prevented, along with the process of balancing the cost of protecting the company against a risk versus the cost of exposure to that risk. The ideal way to cope with risk is to perceive risk at its inception, and taking risk under control right from its inception stage **(Cornelia, 1996)**. Entrepreneurs, in actuality, tend to proactively deal with the risks. Risk-taking has a curvilinear relationship with performance of entrepreneurial firms. Research findings suggest that entrepreneurial firms exhibiting moderate levels of risk-taking would outperform in market as compare to those exhibiting either very high or very low levels of risk-taking (**Begley & Boyd 1987; Kreiser et al., 2002; Tang et al., 2008; Kreiser & Davis, 2010)**. Factors such as how the risk problem is framed **(Baird & Thomas 1985; Stewart & Roth 2001)**, results of past risk taking **(Covin & Slevin, 1989; Goll & Rasheed 1997; Swierczek & Ha, 2003)**, and the ability to perform under risky conditions **(Brockhaus, 1980; Lichtenstein & Brush, 2001; Dimitratos et al., 2004; Soininen et al., 2011)** effects the risk taking ability of entrepreneur.

2.1.1.3. Proactiveness

Proactiveness is an opportunity seeking, forward looking perspective involving introducing new products or services ahead of the competition and acting in anticipation of future demand to create, change and shape the environment **(Lumpkin & Dess, 1996; Kreiser et al., 2002)**. Proactiveness is manifested in; (i) aggressive behavior directed at rival firms; and (ii) the organizational pursuit of favorable business opportunities. Proactiveness simply is the ability to take the initiative, whenever the situation demands. **Porter (1985)** posited that, in certain situations, firm could utilize proactive behavior in order to increase their competitive position in relation to other firms. Proactiveness is concerned with first mover and other actions aimed at seeking to secure and protect market share and with a forward-looking perspective reflected in actions taken in anticipation of future demand **(Venkatraman, 1989; Naman & Slevin 1993; Lee & Penning 2001; Dimitratos et al., 2004)**. Proactiveness is not only in defence, but in offence as well. **Swierczek & Ha (2003); Green et. al. (2008); Stam & Elfring (2008); Clercq et. al. (2010)**, **Kreiser & Davis (2010)** suggest that proactiveness refers to processes aimed at anticipating and acting on future needs by seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of life cycle. Thus proactiveness pertains to a willingness to initiate to which competitors then respond.

2.1.1.4. Competitive Aggressiveness

Competitive aggressiveness refers to a firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the marketplace **(Kraus et al., 2005)**. Competitive aggressiveness also reflects a willingness to be unconventional rather than rely on traditional methods of competing. This aspect is used to measure how entrepreneurial firms deal with threats and it also refers to the firm responsiveness directed toward achieving competitive advantage **(Lumpking & Dess, 2001; Frese et al., 2002; Grande et al., 2011)**. In the literature, the terms proactiveness and competitive aggressiveness are often used inter-changeably but there is some difference between proactiveness and competitive aggressiveness. Proactiveness refers to how a firm relates to market opportunities in the process of creating demand. Competitive

aggressiveness, in contrast, refers to how firms relate to competitors, that is, how firms respond to trends and demand that already exist in the marketplace **(Lumpkin & Dess, 2001).**

2.1.1.5. Autonomy

Autonomy refers to the independent action of an individual or a team in bringing forth an idea or a vision and carrying it through to completion **(Lumpkin & Dess, 1996)**. In general, it means the ability and will to be self-directed in the pursuit of opportunities. In an organizational context, it refers to freely taken action; irrespective of organizational constraints; for establishment and smooth running of a venture **(Shrivastava & Grant, 1985**; **Stevenson & Jaillo, 1990; Kraus et al., 2005)**. Autonomy in firms may vary with the size of organization, management style, or ownership. **Lumpkin and Dess (1996)** found a strong relation of managerial autonomy with entrepreneurial orientation.

Now the question arises whether various dimensions of entrepreneurial orientation are independent of each other or not. **Covin and Slevin (1989)** argue that entrepreneurial orientation is best viewed as a uni-dimensional concept. In contrast **Lumpkin and Dess (1996)** argue that various dimensions of entrepreneurial orientation may occur in different combinations and it is a multi dimension construct. The basic premise underlying this argument is that each of these sub-dimensions of entrepreneurial orientation may have a differential relationship with entrepreneurial outcomes. For example, risk taking has shown a curvilinear relationship with performance while innovation and proactiveness has a positive and direct relationship with performance (**Kreiser et al. 2002; Tang et al. 2008; Kreiser & Davis 2011).**

2.2. Performance

Literature on the construct of performance reveals that there is no consensus among the researchers on the appropriate measures of business performance indicators. As a result, a wide diversity of performance measures i.e. objective and subjective measures, as well financial and non-financial measures were used across studied; which leads to high diversity in EO-performance relationship **(Chakravarthy 1986; Venkataraman & Ramanujam 1986; Murphy et al., 1996; Combs et al., 2005)**. Research that considers only a single

dimension or a narrow range of the performance indicators may produce misleading results. Therefore, the question arises as to what is the appropriate form of performance measurement. Should it be financial? e.g sales growth, return on investment, income growth or profitability. Or should it be non financial? e.g. satisfaction level of stakeholders or positive response in community. Or both? It is generally agreed among researchers that objective measures of performance are more appropriate than subjective measures of performance. But objective data is very difficult to obtain mainly because respondents are generally reluctant to release sensitive information to outsiders **(Dess & Priem, 1995).** On the other hand, owner and managers are generally inclined to provide subjective evaluation of their firm performance, which lacks strong reliability **(Wiklund, 1999; Wiklund & Shepherd, 2005).** An alternative view is that performance is multidimensional in nature and therefore it is advantageous to integrate various subjective and objective measures of performance for accurate measurement of performance (**Lumpkin & Dess, 1996; Murphy et al., 1996; Yusaf, 2002; Combs et al., 2005; Wiklund & Shepherd, 2005**).

2.3. Entrepreneurial Orientation - Performance Relationship:

Entrepreneurial Orientation (EO) is a key ingredient for organizational success. Three types of models are evident in the EO literature:

1. the construct model, in which the dependent variable is EO and the researchers focus on its antecedents **(Lachman 1980; Miller & Toulouse, 1986; Stevenson & Jaillo, 1990; Zahra, 1991; Zahra et al., 1999; Littunen, 2000; Poon et al., 2006; Holt et al., 2007)**
2. the EO-Strategy model, which aligns the level of EO with different strategies **(Mintzberg 1973; Khandwalla, 1977; Miller & Friese, 1982; Burgelman, 1983; Galbraith & Kazanjina, 1986; Covin & Slevin 1988; Zahra, 1993; Covin et al., 1994; Lumpkin & Dess, 1996; Dess et al., 1997; Frese et al., 2002; Ireland et al., 2009)**
3. the performance model, in which the EO-performance linkage is explored, often including not only bivariate relationship, but also multivariate relationship by considering moderating and mediating variables related to external environment and /

or organizational environment and by looking at the main effect between the two variables as well as interaction effect with moderating or mediating variables. **(Covin and Slevin 1989; Zahra, 1991; Wiklund, 1999; Zahra & Garvis, 2000; Lee & Penning, 2001; Yusaf, 2002; Dimitratos et al., 2004; Kraus et al., 2005; Wiklund & Shepherd, 2005; Stam & Elfring, 2008; Ireland et al., 2009, Kreiser & Davis, 2010; Grande et al., 2011; Soininen et al., 2011).**

The relationship between entrepreneurship and firm performance has received considerable attention in the organizational and entrepreneurial literature over the last two decades and scholars have theorized that the incidence of firm-level entrepreneurial behaviors - a propensity to engage in relatively high levels of risk taking, innovative, and proactive behaviors - is positively associated with organizational profitability and growth **(Covin & Slevin, 1991, Lumpkin & Dess, 1996, Wiklund & Shepherd, 2003, Covin et al., 2006, Ireland et al., 2009, Soininen et al., 2011)**. However, the magnitude of this relationship seems to vary across studies. While some studies have found that businesses that adopts a strong entrepreneurial orientation performs much better than firms that do not adopt an entrepreneurial orientation **(Covin & Slevin, 1988; Wiklund & Shepherd, 2003; Hult et al., 2004; Kraus et al., 2005; Kreiser & Davis 2010)**, other studies reported lower correlations between EO and performance **(Zahra, 1991; Dimitratos et al., 2004; William & Sinkula 2009).** Some studies were unable to find a significant relationship between EO and performance **(Covin et al., 1994; George et al., 2001; Tang & Koveos, 2004).** Some studies have shown that the relationship between EO and performance is not that straightforward rather it shaped like inverted U (**Bhuian et al., 2005; Tang et al., 2008)** which means that a high degree of EO is not always desirable in certain market and structural conditions. Thus, there is a considerable variation in the reported relationships between EO and business performance. The reasons for variation in results can be attributed to factors like difference in the scales of entrepreneurial orientation being used, difference in methodology being adopted, opinion regarding moderating variables and indicator components of performance construct.

2.3.1. Contingency framework of EO- Performance Relationship

The literature suggests that the relationship between EO and performance is not that straight forward rather it has been influenced by the interference of various elements of organizational and industrial environment. **Venkatraman (1989)** has suggested the moderating effects, mediating effects, independent effects, and interaction effects models for investigating the impact of third variables as a means of exploring contingency relationships. In the moderating-effects model the form or strength of the EO-performance relationship varies with organizational structure. **Covin & Slevin (1988)** posited that organizations are arrayed along a mechanistic-organic continuum, which, they argued, constitutes "two formally contrasted forms of management system". Organic organizations typically are decentralized, informal, have emphasis on lateral interaction and an equal distribution of knowledge throughout the organizational network. Whereas, Mechanistic organizations tend to be highly centralized and formal. Many researcher (e.g. **Khandwalla 1977; Covin and Slevin 1991; Naman & Slevin 1993; Kreiser & Davis 2010; Kraus et al. 2011)** argue that EO needs to be associated with the low structural formalization, decentralization, and low complexity inherent in organic organization structures for better performance.

In mediating-effects models, EO is considered an antecedent variable, firm performance is the outcome variable and the integration of organizational activities is the mediating variable. Effectively integrating activities and processes intervene in the relationship between EO and performance. **Miller (1983)** suggests that such integrating activities would include the "extensive use of structural integration devices such as committees and task forces". **Porter (1985)** suggests the term horizontal organization, which consists of horizontal structures, horizontal systems, and horizontal human resource practices to integrate activities across business units within a corporation. In independent-effects models, EO and environmental munificence are depicted as having independent effects on the firm performance. Environmental munificence refers to the availability of resources and the amount of external opportunities that are present in a specific environmental setting **(Mintzberg, 1973; Miller & Frieses, 1978; Miller, 1983; Dess & Beard, 1984; Covin & Slevin, 1988)** and can also be considered as the profitability or growth rates of the industry in which a firm competes. This relationship is consistent with the traditional industrial organization paradigm, which

posits that the industry within which a firm competes has a critical impact on its performance **(Porter, 1985)**. Lastly, in interaction-effects models, various elements of organizational and industrial environment are believed to interact with EO to influence firm performance (**Naman & Slevin, 1993; Lumpkin & Dess, 1996**). **Wiklund (1999)** indicates that increase in firm performance related to EO is sustainable over long periods of time, but this relationship may be contingent on the environmental context in which the firm operates. **Wiklund and Sheperd (2005)** suggest that studying multivariate configurations of an entrepreneurial orientation and other important constructs may provide a more complete understanding of the entrepreneurial orientation–performance relationship than bivariate models. Other variables, in addition to EO, could also influence performance directly or may moderate the relationship between EO and performance. **Rauch et al. (2006)** claim that relationship between entrepreneurial orientation and performance is moderated by national culture, size of business organization, and technology intensity of the firm. **Stam and Elfring (2008)** have highlighted the role of network centrality in EO- Performance relationship. **Kreiser and Davis (2010)** suggest that no one structure is universally appropriate for an organization. The contingent factors upon which the appropriate structure depends may include organizational factors like strategy, size, support, resources etc. and environmental factors like dynamism, munificence, regulations, and industry turbulence etc. Contingency theory further suggests that congruence or "fit" among key variables such as industry conditions and organizational processes is critical for obtaining optimal performance and the relationship between two variables is depended upon the interference of a third variable, therefore, by introducing moderators into EO - performance relationships the misleading inferences can be reduced and more precise and specific understanding about entrepreneurial orientation - performance relationship can be developed **(Covin & Slevin, 1989; Zahra, 1991; Zahra & Garvis, 2000; Jogaratnam, 2002; Dimitratos et al., 2004; Hult et al., 2004; Wiklund & Shepherd, 2005; Rauch et al., 2006; Green et al., 2008; Kreiser & Davis, 2010; Grande et al., 2011; Soininen et al., 2011)**.

2.4. Need for the Study

Forgoing review of literature suggests that an EO is a key ingredient for organizational success. It has been found that firms which have a strong entrepreneurial orientation will

result in high performance. However, the magnitude of this relationship varies across studies. While some studies have found that businesses that adopt a strong entrepreneurial orientation perform much better than firms that do not adopt an entrepreneurial orientation, others reported lower correlations between EO and performance. Some studies are unable to find a significant relationship between EO and performance. Some studies have suggested that a high degree of EO is not always desirable in certain market and structural conditions. Thus, there is a considerable variation in the reported relationships between EO and business performance. The reason for variation in results can be attributed to factors like difference in the scales of entrepreneurial orientation being used, difference in methodology being adopted and difference in opinion regarding the impact of various organizational and environmental variables in EO- Performance relationship and different indicators of business performance.

Further, the formulation of the EO performance relationship models and the original empirical tests were mainly done in the North American context and very little has been done in emerging economies. India, as a second largest emerging economy after China, presents a compelling context to examine and refine our understanding on the EO - Performance relationship because external environment of India is substantially different from US and West.

At present, the Indian business environment is very conducive for the entrepreneurial activities and the Indian government as well as intelligentsia are stressing on the need for promoting entrepreneurship as a solution to the Indian problems of unemployment and economic growth. There is a need to know the factors responsible for the success of entrepreneurial activities. It is a pertinent to explore the orientation of individuals suited for entrepreneurship so that concerted efforts can be made to develop these orientations among youth of India. However the literature suggests that there are not many studies exploring the entrepreneurial orientation in India. Further, there is hardly any study conducted for exploring the relationship between EO and performance in Indian context. The present study is an endeavour to fill these gaps. The results of the study will help the industry and entrepreneurs in understanding the implications of different dimensions of EO for the performance of their business. Secondly, the result of the study will help the public policy makers in designing the policy for the promotion of entrepreneurship in India. As the study

proposes to develop a model of EO- performance relationship in Indian context, it will also contribute to the existing literature on the constructs of entrepreneurship and EO-performance relationship.

3. RSEARCH METHODOLOGY

On the basis of the thorough review on the construct of EO- Performance relationship, following research methodology has been selected for the conduct of present study.

3.1. Research Design

Study will be **descriptive** in nature, where researcher will not have any control on the variables and it will be **cross- sectional** in nature, where information will be gathered from respondents at a particular point of time.

3.2. Research Problem

The title of the present study will be:

Relationship of Entrepreneurial Orientation and Business Performance of North Indian Firms

3.3. Objectives of the Study

1. To study the entrepreneurial orientation of North Indian firms.
2. To study the association of entrepreneurial orientation with Organizational variables.
3. To study the impact of entrepreneurial orientation on the performance of business.
4. To study the role of organizational and industrial environment in EO - performance relationship.
5. To suggest a comprehensive model of EO - Performance relationship in the Indian context.

3.4. Hypotheses

Based on different conceptual frameworks from the research literature and objectives of the present study, following hypotheses have been framed:

H_{01}: Demographic variables are not significantly associated with Entrepreneurial Orientation.

H_{02}: Entrepreneurial Orientation is not significantly associated with performance of Business.

H_{03}: Organizational and industrial environment does not significantly affect the EO-performance relationship.

3.5. Scope of the Study:

The scope of the study will be limited to the north Indian firms. The firms listed on National Stock Exchange (NSE) of India will be considered. The NSE listed companies having their registered/ corporate office in the North Indian states and union territories (including Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Uttaranchal, Uttar Pradesh, Rajasthan, Chandigarh, and National Capital Region) will be taken into consideration. The Promoters, CEO, Directors and/or senior managers, who have decision making power in the organization, will be taken as respondents.

3.6. Sample Design: Population, Sampling Unit, Sample Size and Sampling Technique

As on December, 2011, 1633 companies are listed on National Stock Exchange (NSE) of India. These will constitute the universe for the study. Out of these, 316 firms (Annexure-I) having registered/corporate office in North India (covering Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Uttaranchal, Uttar Pradesh, Rajasthan, Chandigarh, and National Capital Region) will be consider as population. Five managerial personnel having decision making power in the organization (e.g. Promoters, CEO, Directors and/or senior managers), will be taken as respondents from each firm. Thus, a sample of 500 respondents from 100 firms selected randomly will be used for the study.

3.7. Data Sources and Research Instruments

For the conduct of present study, both primary and secondary data will be used. Primary data will be collected to measure EO, organizational and industrial environment and perceived performance. Secondary data will be used to measure archival performance.

- To measure the entrepreneurial orientation, a scale will be developed, on the basis of the literature review.
- To measure the subjective performance, a scale will be developed using subjective financial and subjective non-financial indicators. To measure the objective archival performance, financial results available in the published annual reports of the firms will be used.

- To measure organizational and industrial environment, 'organisational structure' and 'industrial turbulence' scales developed by **Naman & Slevin (1993)** on the basis of **Khandwalla (1977)**, **Miller and Friesen (1982)** will be used.

3.8. Conceptualized Research Models

Following research models of EO- Performance relationship have been conceptualized:

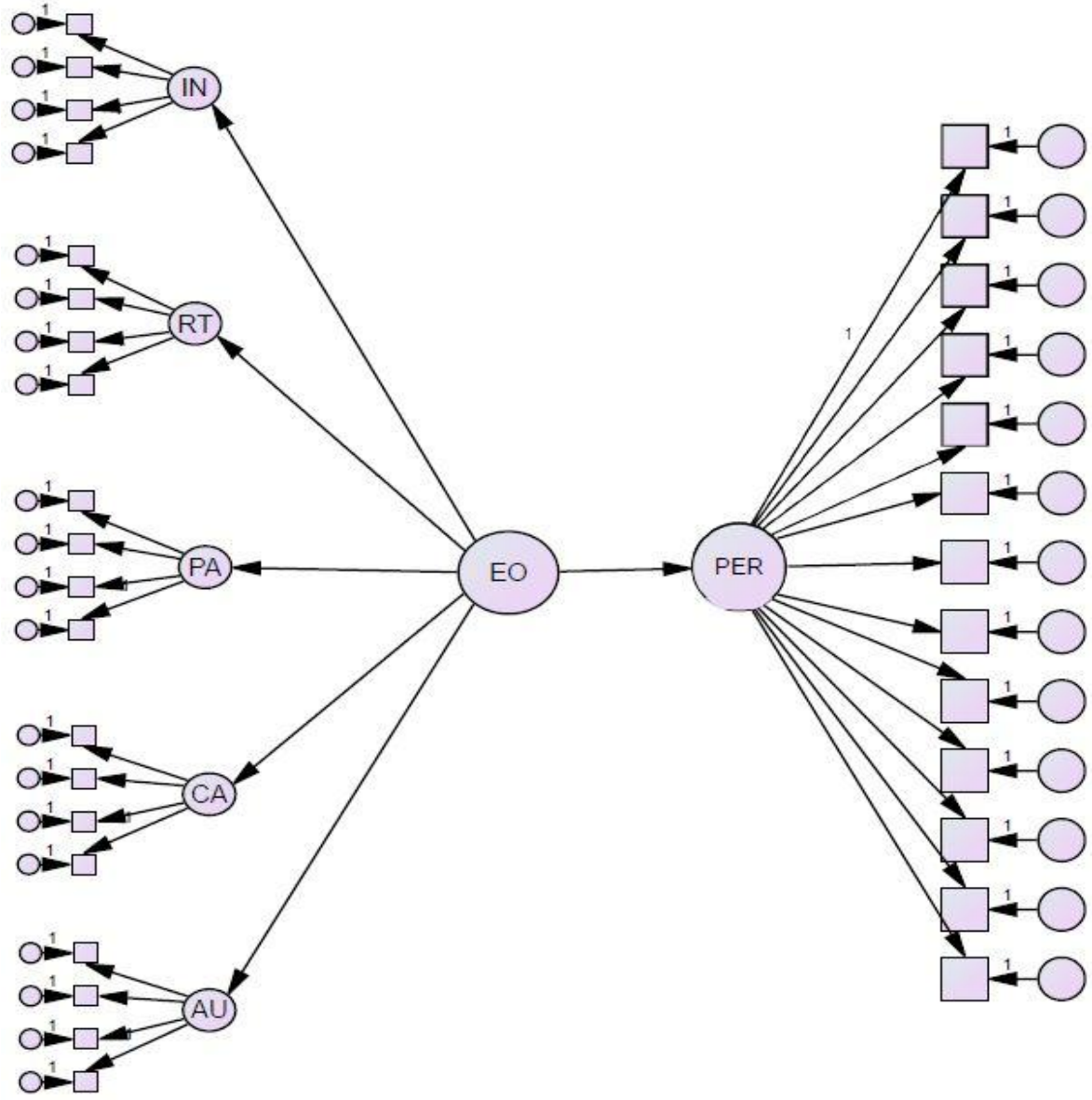

Figure 1 : Conceptualized Research Model - 1

Where, IN= Innovation, RT= Risk taking, PA= Proactiveness, CA= Competitive Aggressiveness, AU= Autonomy, EO= Entrepreneurial Orientation, PER= Performance

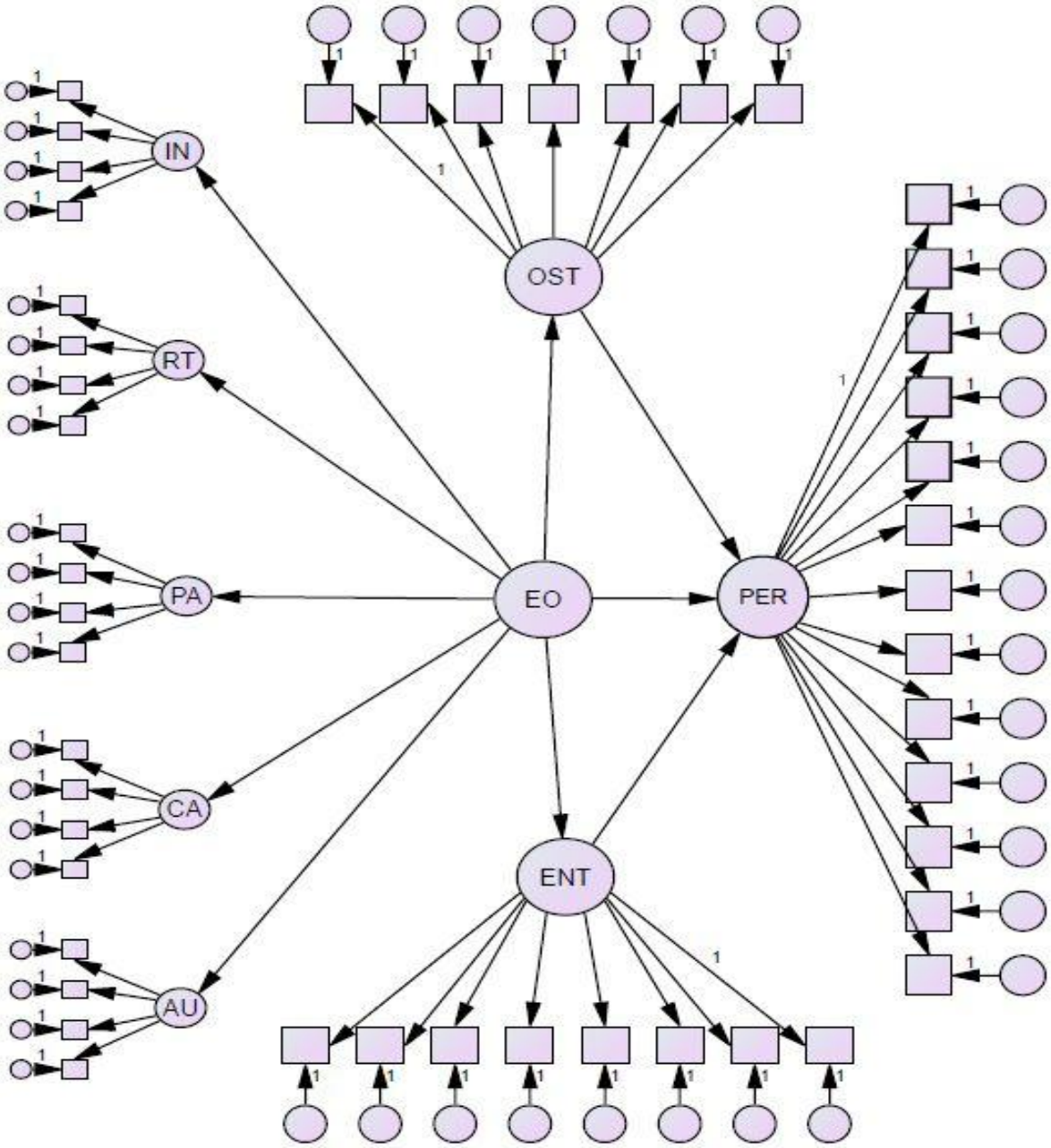

Figure 2: Conceptualized Research Model - 2

Where IN= Innovation, RT= Risk taking, PA= Proactiveness, CA= Competitive Aggressiveness, AU= Autonomy, EO= Entrepreneurial Orientation, PER= Performance, OST= Organizational Structure & ENT= Environmental or Industrial Turbulence.

3.9 Operational Definitions:

3.9.1 Entrepreneurial orientation (EO)

EO refers to a firm's strategic orientation and it is usually seen as the extent to which a firm innovates, takes risks to compete aggressively and acts autonomously and proactively. In the present study EO will be operationalized by considering the dimensions of Innovation, Risk taking, Proactiveness, Competitive aggressiveness and Autonomy.

3.9.2 Business Performance

Business performance refers to objective as well as subjective financial and non-financial achievements of the organisation with respect to all the stakeholders like shareholders, customers, employees etc.

3.9.3. Organizational Structure

Organizational structure is considered as the basis for effective implementation of strategy, enabling or constraining opportunity exploration and exploitation. Based upon certain environmental and demographic contingent factors, two possible organizational outcomes define the two ends of structural continuum, namely mechanistic and organic structure. A more formal and bureaucratic form, the mechanistic structure refer to top-down approach, with well defined roles in a relatively stable environment, while organic firm has a change-oriented mission and typically decentralized, informal, have an emphasis on lateral interaction and an equal distribution of knowledge throughout the organizational network.

3.9.4. Environmental or Industrial Turbulence

Environmental or Industrial turbulence often reflected through environmental dynamism and munificence refers to the "rate of change and innovation in an industry as well as the uncertainty or perceived instability of the actions of competitors and customers in the firm's environment".

3.10 Tools for Analysis

The collected data will be analyzed using Descriptive Statistics, Reliability analysis, Bi-variate and Multivariate analysis tools. Software packages like SPSS & AMOS will be used for computerized data analysis.

4. CHAPTER SCHEME

Chapter 1: Introduction

Chapter 2: Review of Literature

Chapter 3: Research Methodology

Chapter 4: Entrepreneurial Orientation of North Indian Firms

Chapter 5: Entrepreneurial Orientation & Business Performance Relationship

Chapter 6: EO- Performance Model in the Indian Context

Chapter 7: Findings and Suggestions

References

Annexure

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ANNEXURE – I

Sr. No	SYMBOL	COMPANY NAME	CITY/STATE
1	A2ZMES	A2Z Maintenance & Engineering Services Limited	GURGAON
2	ACE	Action Construction Equipment Limited	NEW DELHI
3	AGRODUTCH	Agro Dutch Industries Limited	CHANDIGARH
4	AHLUCONT	Ahluwalia Contracts (India) Limited	NEW DELHI
5	AHLWEST	Asian Hotels (West) Limited	NEW DELHI
6	AKSHOPTFBR	Aksh Optifibre Limited	RAJASTHAN
7	ALCHEM	Alchemist Limited	NEW DELHI
8	ALMONDZ	Almondz Global Securities Limited	NEW DELHI
9	ALPSINDUS	Alps Industries Limited	GHAZIABAD
10	AMDIND	AMD Industries Limited	NEW DELHI
11	AMTEKAUTO	Amtek Auto Limited	HARYANA
12	AMTEKINDIA	Amtek India Limited	HARYANA
13	ANANTRAJ	Anant Raj Industries Limited	HARYANA
14	ANGIND	ANG Industries Limited	NEW DELHI
15	ANSALAPI	Ansal Properties & Infrastructure Limited	NEW DELHI
16	ANSALHSG	Ansal Housing and Construction Limited	NEW DELHI
17	APLAPOLLO	APL Apollo Tubes Limited	DELHI
18	ARAVALIIND	Aravali Industries Limited	NEW DELHI
19	ARCHIES	Archies Limited	GURGAON
20	ARENTERP	Rajdarshan Industries Limited	UDAIPUR
21	ARIHANTCOT	Arihant Cotsyn Limited	LUDHIANA
22	ARIHANTIND	Arihant Industries Limited	LUDHIANA
23	ARIHANTRED	Arihant Threads Limited	LUDHIANA
24	AROGRANITE	Aro Granite Industries Limited	NEW DELHI
25	ASAHIINDIA	Asahi India Glass Limited	NEW DELHI
26	ASIANHOTNR	Asian Hotels (North) Limited	NEW DELHI
27	ATLASCYCLE	Atlas Cycles (Haryana) Limited	SONEPAT
28	AUTOLITIND	Autolite (India) Limited	JAIPUR
29	AXIS-IT&T	Axis-IT&T Limited	NEW DELHI
30	BAGFILMS	B.A.G Films and Media Limited	NEW DELHI
31	BANARBEADS	Banaras Beads Limited	VARANASI
32	BGLOBAL	Bharatiya Global Infomedia Limited	NEW DELHI
33	BHARATGEAR	Bharat Gears Limited	FARIDABAD
34	BHARATRAS	Bharat Rasayan Limited	NEW DELHI
35	BHARTIARTL	Bharti Airtel Limited	NEW DELHI
36	BHEL	Bharat Heavy Electricals Limited	NEW DELHI
37	BHUSANSTL	Bhushan Steel Limited	NEW DELHI
38	BIL	Bhartiya International Limited	NEW DELHI

39	BINDALAGRO	Oswal Chemicals & Fertilizers Limited	PUNJAB
40	BLBLIMITED	BLB Limited	NEW DELHI
41	BLKASHYAP	B. L. Kashyap and Sons Limited	NEW DELHI
42	BROOKS	Brooks Laboratories Limited	MOHALI
43	BSL	BSL Limited	RAJASTHAN
44	CANDC	C & C Constructions Limited	NEW DELHI
45	CANTABIL	Cantabil Retail India Limited	NEW DELHI
46	CAREERP	Career Point Limited	RAJASTHAN
47	CEBBCO	Commercial Engineers & Body Builders Co Limited	KANPUR
48	CEPHAMILK	Cepham Milk Specialities Limited	PUNJAB
49	CHAMBLFERT	Chambal Fertilizers & Chemicals Limited	RAJASTHAN
50	CIMMCO	Cimmco Limited	NEW DELHI
51	CLUTCHAUTO	Clutch Auto Limited	NEW DELHI
52	CONCOR	Container Corporation of India Limited	NEW DELHI
53	CONSOFINVT	Consolidated Finvest & Holdings Limited	UTTAR PRADESH
54	CORDSCABLE	Cords Cable Industries Limited	NEW DELHI
55	COSMOFILMS	Cosmo Films Limited	NEW DELHI
56	CREWBOS	Crew B.O.S. Products Limited	NEW DELHI
57	CYBERMEDIA	Cyber Media (India) Limited	NEW DELHI
58	CYBERSPACE	Cyberspace Limited	NEW DELHI
59	DAAWAT	LT Foods Limited	GURGAON
60	DABUR	Dabur India Limited	NEW DELHI
61	DCM	DCM Limited	NEW DELHI
62	DCMFINSERV	DCM Financial Services Limited	NEW DELHI
63	DCMSRMCONS	DCM Shriram Consolidated Limited	NEW DELHI
64	DEN	Den Networks Limited	NEW DELHI
65	DHANUKA	Dhanuka Agritech Limited	NEW DELHI
66	DISHTV	Dish TV India Limited	DELHI
67	DLF	DLF Limited	HARAYANA
68	DREDGECORP	Dredging Corporation of India Limited	DELHI
69	DWARKESH	Dwarikesh Sugar Industries Limited	BIJNOR
70	ECEIND	ECE Industries Limited	NEW DELHI
71	EDUCOMP	Educomp Solutions Limited	NEW DELHI
72	EICHERMOT	Eicher Motors Limited	NEW DELHI
73	EIDERTELE	Eider Infotech Limited	CHANDIGARH
74	ENGINERSIN	Engineers India Limited	NEW DELHI
75	EONELECT	Eon Electric Limited	SONEPAT
76	ERAINFRA	Era Infra Engineering Limited	NEW DELHI
77	ESCORTS	Escorts Limited	HARYANA
78	ESTER	Ester Industries Limited	UTTARAKHAND
79	EUROSOFTAL	European Software Alliances Limited	KANPUR

80	EVINIX	Evinix Accessories Limited	HARYANA
81	FCSSOFT	FCS Software Solutions Limited	DELHI
82	FEDDERLOYD	Fedders Lloyd Corporation Limited	UTTAR PRADESH
83	FIEMIND	Fiem Industries Limited	NEW DELHI
84	FKONCO	Fresenius Kabi Oncology Limited	NEW DELHI
85	FMGOETZE	Federal-Mogul Goetze (India) Limited.	DELHI
86	FORTIS	Fortis Healthcare (India) Limited	NEW DELHI
87	GAIL	GAIL (India) Limited	NEW DELHI
88	GENUSPOWER	Genus Power Infrastructures Limited	NEW DELHI
89	GILLETTE	Gillette India Limited	RAJASTHAN
90	GINNIFILA	Ginni Filaments Limited	UTTAR PRADESH
91	GLOBALVECT	Global Vectra Helicorp Limited	NEW DELHI
92	GLOBUSSPR	Globus Spirits Limited	NEW DELHI
93	GOENKA	Goenka Diamond and Jewels Limited	JAIPUR
94	GRAVITA	Gravita India Limited	JAIPUR
95	GROWTECHNO	Growth Techno Projects Limited	NEW DELHI
96	GSKCONS	GlaxoSmithKline Consumer Healthcare Limited	PUNJAB
97	HALONIX	Halonix Limited	UTTAR PRADESH
98	HANUNG	Hanung Toys and Textiles Limited	NEW DELHI
99	HARYANSHET	Haryana Sheet Glass Limited	NEW DELHI
100	HAVELLS	Havells India Limited	DELHI
101	HBSTOCK	HB Stockholdings Limited	GURGAON
102	HCL-INSYS	HCL Infosystems Limited	NEW DELHI
103	HCLTECH	HCL Technologies Limited	NEW DELHI
104	HEIDELBERG	HeidelbergCement India Limited	HARYANA
105	HEROMOTOCO	Hero MotoCorp Limited	NEW DELHI
106	HFCL	Himachal Futuristic Communications Limited	HIMACHAL PRADESH
107	HINDZINC	Hindustan Zinc Limited	RAJASTHAN
108	HONDAPOWER	Honda Siel Power Products Limited	NEW DELHI
109	HOPFL	House of Pearl Fashions Limited	NEW DELHI
110	HTMEDIA	HT Media Limited	NEW DELHI
111	IBPOW	Indiabulls Power Limited	NEW DELHI
112	IBREALEST	Indiabulls Real Estate Limited	NEW DELHI
113	IBSEC	Indiabulls Securities Limited	NEW-DELHI
114	IBWSL	Indiabulls Wholesale Services Limited	NEW DELHI
115	ICRA	ICRA Limited	NEW DELHI
116	IFCI	IFCI Limited	NEW DELHI
117	IGL	Indraprastha Gas Limited	NEW DELHI
118	INDIABULLS	Indiabulls Financial Services Limited	NEW DELHI
119	INDIAGLYCO	India Glycols Limited	UTTARANCHAL
120	INDOSOLAR	Indosolar Limited	NEW DELHI

121	INDRAMEDCO	Indraprastha Medical Corporation Limited	NEW DELHI
122	INDSWFTLAB	Ind-Swift Laboratories Limited	CHANDIGARH
123	INDSWFTLTD	Ind-Swift Limited	CHANDIGARH
124	INFINITE	Infinite Computer Solutions (India) Limited	NEW DELHI
125	INSECTICID	Insecticides (India) Limited	DELHI
126	IOLCP	IOL Chemicals and Pharmaceuticals Limited	BARNALA
127	IPGETF	ICICI Prudential Mutual Fund - ICICI Prudential Gold ETF	NEW DELHI
128	ITIL	Information Technologies India Limited	UTTAR PRADESH
129	J&KBANK	The Jammu & Kashmir Bank Limited	SRINAGAR
130	JAGRAN	Jagran Prakashan Limited	KANPUR
131	JAGSNPHARM	Jagsonpal Pharmaceuticals Limited	NEW DELHI
132	JAINSTUDIO	Jain Studios Limited	NEW DELHI
133	JAMNAAUTO	Jamna Auto Industries Limited	HARYANA
134	JAYBARMARU	Jay Bharat Maruti Limited	DELHI
135	JBMA	JBM Auto Limited	NEW DELHI
136	JCTEL	JCT Electronics Limited	MOHALI
137	JHS	JHS Svendgaard Laboratories Limited	HIMACHAL PRADESH
138	JINDALPOLY	Jindal Poly Films Limited	UTTAR PRADESH
139	JINDALSAW	Jindal Saw Limited	MATHURA
140	JINDALSTEL	Jindal Steel & Power Limited	HARYANA
141	JINDCOT	Jindal Cotex Limited	LUDHIANA
142	JINDRILL	Jindal Drilling And Industries Limited	GURGAON
143	JKCEMENT	JK Cement Limited	KANPUR
144	JPINFRATEC	Jaypee Infratech Limited	NOIDA
145	JSL	Jindal Stainless Limited	HISAR
146	JUBLFOOD	Jubilant Foodworks Limited	NOIDA
147	JVLAGRO	JVL Agro Industries Limited	VARANASI
148	KALINDEE	Kalindee Rail Nirman (Engineers) Limited	NEW DELHI
149	KEI	KEI Industries Limited	NEW DELHI
150	KIL	Kamdhenu Ispat Limited	NEW DELHI
151	KLGSYSTEL	KLG Systel Limited	GURGAON
152	KMF	KMF Limited	NEW DELHI
153	KMSUGAR	K.M.Sugar Mills Limited	KANPUR
154	KOHINOOR	Kohinoor Foods Limited	NEW DELHI
155	KOTHARIPRO	Kothari Products Limited	KANPUR
156	KOUTONS	Koutons Retail India Limited	NEW DELHI
157	KRBL	KRBL Limited	DELHI
158	KRISHNAENG	Krishna Engineering Works Limited	JALANDHAR
159	KWALITY	Kwality Dairy (India) Limited	FARIDABAD
160	LAKSHMIEFL	Lakshmi Energy and Foods Limited	CHANDIGARH

161	LIBERTSHOE	Liberty Shoes Limited	KARNAL
162	LLOYDELENG	Lloyd Electric & Engineering Limited	RAJASTHAN
163	LML	LML Limited	KANPUR
164	LPDC	Landmark Property Development Company Limited	NEW DELHI
165	LUMAXAUTO	Lumax Automotive Systems Limited	NEW DELHI
166	LUMAXIND	Lumax Industries Limited	NEW DELHI
167	MAANALU	Maan Aluminium Limited	NEW DELHI
168	MADHAV	Madhav Marbles and Granites Limited	UDAIPUR
169	MAGNUM	Magnum Ventures Limited	NEW DELHI
170	MALWACOTT	Malwa Cotton Spg. Mills Limited	LUDHIANA
171	MANGLMCEM	Mangalam Cement Limited	RAJASTHAN
172	MARUTI	Maruti Suzuki India Limited	NEW DELHI
173	MAWANASUG	Mawana Sugars Limited	NEW DELHI
174	MINDAIND	Minda Industries Limited	DELHI
175	MIRZAINT	Mirza International Limited	KANPUR
176	MODTHREAD	Modern Thread Limited	JAIPUR
177	MOREPENLAB	Morepen Laboratories Limited	HIMACHAL PRADESH
178	MOSERBAER	Moser-Baer (I) Limited	NEW DELHI
179	MOTHERSUMI	Motherson Sumi Systems Limited	NEW DELHI
180	MOTOGENFIN	The Motor & General Finance Limited	NEW DELHI
181	MTNL	Mahanagar Telephone Nigam Limited	NEW DELHI
182	MUNJALSHOW	Munjal Showa Limited	GURGAON
183	MVL	MVL Limited	NEW DELHI
184	MVLIND	MVL Industries Limited	NEW DELHI
185	NAHARCAP	Nahar Capital and Financial Services Limited	LUDHIANA
186	NAHARINDUS	Nahar Industrial Enterprises Limited	LUDHIANA
187	NAHARPOLY	Nahar Poly Films Limited	LUDHIANA
188	NAHARSPING	Nahar Spinning Mills Limited	LUDHIANA
189	NAUKRI	Info Edge (India) Limited	NEW DELHI
190	NDTV	New Delhi Television Limited	NEW DELHI
191	NET4	Net 4 India Limited	NEW DELHI
192	NETWORK18	Network18 Media & Investments Limited	NEW DELHI
193	NFL	National Fertilizers Limited	NEW DELHI
194	NHPC	NHPC Limited	FARIDABAD
195	NIITLTD	NIIT Limited	NEW DELHI
196	NIITTECH	NIIT Technologies Limited	NEW DELHI
197	NOIDATOLL	Noida Toll Bridge Company Limited	NOIDA
198	NOVAELEMAG	Nova Electro Magnetics Limited	NEW DELHI
199	NSIL	Nalwa Sons Investments Limited	NEW DELHI
200	NTPC	NTPC Limited	NEW DELHI

201	NUCHEM	Nuchem Limited	FARIDABAD
202	NUCLEUS	Nucleus Software Exports Limited	NOIDA
203	NUTEK	Nu Tek India Limited	NEW DELHI
204	OMAXAUTO	Omax Autos Limited	HARYANA
205	OMAXE	Omaxe Limited	NEW DELHI
206	OMMETALS	OM Metals Infraprojects Limited	JAIPUR
207	ONGC	Oil & Natural Gas Corporation Limited	NEW DELHI
208	ORIENTABRA	Orient Abrasives Limited	NEW DELHI
209	ORIENTALTL	Oriental Trimex Limited	NEW DELHI
210	ORIENTBANK	Oriental Bank of Commerce	NEW DELHI
211	ORIENTCERA	Orient Ceramics and Industries Limited	UTTAR PRADESH
212	OSWALAGRO	Oswal Agro Mills Limited	LUDHIANA
213	OUDHSUG	The Oudh Sugar Mills Limited	UTTAR PRADESH
214	PANACEABIO	Panacea Biotec Limited	PUNJAB
215	PARABDRUGS	Parabolic Drugs Limited	CHANDIGARH
216	PARACABLES	Paramount Communications Limited	NEW DELHI
217	PARSVNATH	Parsvnath Developers Limited	DELHI
218	PASUPATI	Pasupati Fabrics Limited	NEW DELHI
219	PATWIDECOM	Patel's Widecom (India) Limited	NOIDA
220	PEACOCKIND	Peacock Industries Limited	UDAIPUR
221	PEARLPOLY	Pearl Polymers Limited	NEW DELHI
222	PETRONET	Petronet LNG Limited	NEW DELHI
223	PFC	Power Finance Corporation Limited	NEW DELHI
224	PFS	PTC India Financial Services Limited	NEW DELHI
225	PGEL	PG Electroplast Limited	NEW DELHI
226	PIIND	PI Industries Limited	UDAIPUR
227	PNB	Punjab National Bank	NEW DELHI
228	PNBGILTS	PNB Gilts Limited	NEW DELHI
229	POLYMED	Poly Medicure Limited	NEW DELHI
230	POLYPLEX	Polyplex Corporation Limited	UTTARANCHAL
231	POWERGRID	Power Grid Corporation of India Limited	NEW DELHI
232	PPAP	Precision Pipes And Profiles Company Limited	NEW DELHI
233	PRAKASH	Prakash Industries Limited	HARYANA
234	PREMIERPOL	Premier Polyfilm Limited	NEW DELHI
235	PSB	Punjab & Sind Bank	NEW DELHI
236	PTC	PTC India Limited	NEW DELHI
237	PUNJABCHEM	Punjab Chemicals & Crop Protection Limited	CHANDIGARH
238	PUNJLLOYD	Punj Lloyd Limited	NEW DELHI
239	PVR	PVR Limited	NEW DELHI
240	RAJASPETRO	Rajasthan Petro Synthetics Limited	UDAIPUR
241	RAJINPIPE	Rajinder Pipes Limited	KANPUR

242	RAJINSTEEL	Rajinder Steels Limited	KANPUR
243	RANASUG	Rana Sugars Limited	CHANDIGARH
244	RANBAXY	Ranbaxy Laboratories Limited	PUNJAB
245	RECLTD	Rural Electrification Corporation Limited	NEW DELHI
246	RELAXO	Relaxo Footwears Limited	DELHI
247	RELIGARE	Religare Enterprises Limited	NEW DELHI
248	RSYSTEMS	R Systems International Limited	NEW DELHI
249	RUCHIRA	Ruchira Papers Limited	HIMACHAL PRADESH
250	SAIL	Steel Authority of India Limited	NEW DELHI
251	SALORAINTL	Salora International Limited	NEW DELHI
252	SAMTEL	Samtel Color Limited	NEW DELHI
253	SBBJ	State Bank of Bikaner and Jaipur	JAIPUR
254	SCINTSOFT	Scintilla Software Technology Limited	KANPUR
255	SEINV	S.E. Investments Limited	DELHI
256	SELAN	Selan Exploration Technology Limited	NEW DELHI
257	SELMCL	SEL Manufacturing Company Limited	LUDHIANA
258	SGL	STL Global Limited	NEW DELHI
259	SHILPI	Shilpi Cable Technologies Limited	NEW DELHI
260	SHIVAMAUTO	Shivam Autotech Limited	NEW DELHI
261	SHIV-VANI	Shiv-Vani Oil & Gas Exploration Services Limited	NEW DELHI
262	SHLAKSHMI	Shri Lakshmi Cotsyn Limited	KANPUR
263	SHREECEM	Shree Cements Limited	AJMER
264	SHREYANIND	Shreyans Industries Limited	LUDHIANA
265	SHYAMTEL	Shyam Telecom Limited	JAIPUR
266	SIMBHSUGAR	Simbhaoli Sugars Limited	GHAZIABAD
267	SJVN	SJVN Limited	SHIMLA
268	SMLISUZU	SML Isuzu Limited	PUNJAB
269	SMOBILITY	S Mobility Limited	NOIDA
270	SOFTTECHGR	Software Technology Group International Limited	NEW DELHI
271	SOMANYCERA	Somany Ceramics Limited	NEW DELHI
272	SONASTEER	Sona Koyo Steering Systems Limited	NEW DELHI
273	SPENTEX	Spentex Industries Limited	NEW DELHI
274	SPLIL	SPL Industries Limited	NEW DELHI
275	SPMLINFRA	SPML Infra Limited	NEW DELHI
276	SRF	SRF Limited	NEW DELHI
277	SRGINFOTEC	SRG Infotec (India) Limited	NEW DELHI
278	SRSLTD	SRS Limited	FARIDABAD
279	SSWL	Steel Strips Wheels Limited	PUNJAB
280	STCINDIA	The State Trading Corporation of India Limited	NEW DELHI
281	STERTOOLS	Sterling Tools Limited	NEW DELHI
282	STOREONE	Store One Retail India Limited	NEW DELHI

283	SUBROS	Subros Limited	NEW DELHI
284	SUNSTARLUB	Sunstar Lubricants Limited	NEW DELHI
285	SUPREMETEX	Supreme Tex Mart Limited	LUDHIANA
286	SURYAPHARM	Surya Pharmaceutical Limited	NEW DELHI
287	SURYAROSNI	Surya Roshni Limited	HARYANA
288	SUTLEJTEX	Sutlej Textiles and Industries Limited	RAJASTHAN
289	SWARAJENG	Swaraj Engines Limited	PUNJAB
290	TALBROAUTO	Talbros Automotive Components Limited	HARAYANA
291	TECHNOFAB	Technofab Engineering Limited	NEW DELHI
292	TECPRO	Tecpro Systems Limited	NEW DELHI
293	TFCILTD	Tourism Finance Corporation of India Limited	NEW DELHI
294	TIJARIA	Tijaria Polypipes Limited	JAIPUR
295	TRIDENT	Trident Limited	BARNALA
296	TRITURBINE	Triveni Turbine Limited	NOIDA
297	TTL	T T Limited	NEW DELHI
298	TULIP	Tulip Telecom Limited	NEW DELHI
299	TV18BRDCST	TV18 Broadcast Limited	NEW DELHI
300	TVTODAY	TV Today Network Limited	NEW DELHI
301	UFLEX	UFLEX Limited	NEW DELHI
302	UNITECH	Unitech Limited	NEW DELHI
303	UPERGANGES	Upper Ganges Sugar & Industries Limited	UTTAR PRADESH
304	UTTAMSUGAR	Uttam Sugar Mills Limited	UTTARAKHAND
305	VAIBHAVGEM	Vaibhav Gems Limited	JAIPUR
306	VARDHACRLC	Vardhman Acrylics Limited	LUDHIANA
307	VARDMNPOLY	Vardhman Polytex Limited	LUDHIANA
308	VENUSREM	Venus Remedies Limited	CHANDIGARH
309	VHL	Vardhman Holdings Limited	LUDHIANA
310	VIKASGLOB	Vikas GlobalOne Limited	NEW DELHI
311	VISESHINFO	Visesh Infotecnics Limited	NEW DELHI
312	VISHALRET	Vishal Retail Limited	NEW DELHI
313	VITALCOMM	Vital Communications Limited	NEW DELHI
314	VLSFINANCE	VLS Finance Limited	NEW DELHI
315	VTL	Vardhman Textiles Limited	LUDHIANA
316	WINSOME	Winsome Yarns Limited	CHANDIGARH